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Erigeron strigosus var. *Beyrichii*, T. & G. Fl. N. A. 2: 175 (1843).

This rare and distinct form has lately been collected by Dr. Mohr in Alabama, growing on calcareous hills near Russellville. The plant was first found by Beyrich in "Carolina," and later discoveries show it to range from "Carolina" to Florida, St. Marks (Rugel) to Indian Territory, on the False Washita (Palmer, 479).

COREOPSIS INTEGRIFOLIA Poir. in Lam. Encycl. Suppl. 2: 353 (1811).

Fine specimens of a *Coreopsis*, which apparently belong to the above species, have been secured by Mr. A. H. Curtiss from the region between Jacksonville and Trout Creek, Florida. Authentic material of *C. integrifolia* is meagre, but I have carefully compared the Florida plants with it and find the two almost identical. The flowers, rays and styles are alike, and the leaves agree very well in shape, but those found by Mr. Curtiss have somewhat longer petioles. The plants grow on borders of wet thickets and were in flower and fruit on October 21, 1893.

A New Fossil *Nelumbo* from the Laramie Group at Florence, Colo.

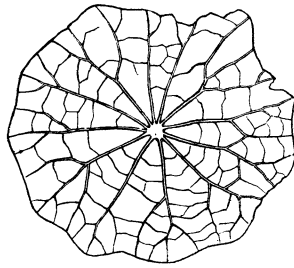
BY ARTHUR HOLLICK.

NELUMBO LARAMIENSIS n. sp.

Leaf orbicular, about $1\frac{1}{2}'$ in diameter, with wavy margin, centrally peltate; primary nerves strong, diverging somewhat irregularly from the centre, forked 1-several times, connected by cross-nervation which is slightly angled or bent outward, especially near the margin.

This little leaf was found in a collection of fossil plants made by Mr. George Hadden from the Laramie group at Florence, Colorado, for the late Dr. J. S. Newberry. Its affinities with the genus *Nelumbo* can hardly be questioned, and it is clearly different from every other fossil species thus far described from this country. In regard to the foreign species I can not be so certain, as some of these have been described or merely named but not figured, and

it is very doubtful if they all belong in the genus.* Schimper, in his *Traité de Paléontologie Végétale*, 3: 95, says in regard to *N. Casparianum* Heer and *N. nymphæoidea* Ettingsh.: "I do not think that the true position of these two last fossils is in the genus *Nelumbium*," but further than this I would not wish to carry the criticism without having had an opportunity to examine the material upon which the names were based. It is, however, pertinent perhaps in this place to call attention to the leaf which was



NELUMBO LARAMIENSIS HOLLICK.

described by Sir J. W. Dawson (*Brasenia antiqua* Dawson, Trans. Roy. Soc. Canada, 3, Sec. 4: 15 (1885)) from the Belly River beds of British Columbia, representing a geological horizon practically equivalent to our Laramie. From the description and figure as given by Dawson it appears to resemble *Nelumbo* more closely

* The geological range of the genus is from the middle cretaceous to the miocene tertiary, and of the thirteen previously named species, five are American, seven are European, and one is Asiatic. For the completeness of the following references I am indebted to Prof. Lester F. Ward, of the United States Geological Survey.

AMERICAN.

1. *N. tenuifolium* Lesq. in Hayden's Ann. Rept. U. S. Geol. and Geog. Surv. 1873, 402; Lesq. Tert. Fl. 253, pl. 46, fig. 3.
2. *N. Lakesianum* Lesq. in Hayden's Ann. Rept. U. S. Geol. and Geog. Surv. 1873, 403; = *N. Lakesii* Lesq. Tert. Fl. 252, pl. 46, figs. 1, 2.
3. *N. arcticum* Heer, Fl. Foss. Arct. 6, Abth. 2: 92, pl. 40, fig. 6.
4. *N. Saskatchewanense* Daws. Trans. Roy. Soc. Canada, 5, Sec. 4: 35.
5. *N. pygmæum* Daws. Trans. Roy. Soc. Canada, 8, Sec. 4: 87, fig. 22.

EUROPEAN.

6. *N. Buchii* Ettingsh. Sitzb. Wien Akad. 10: 428; Denkschr. Wien Akad. 8: 36, pl. 10, figs. 2, 3; 11, fig. 1; 12.

than it does *Brasenia*. Further than this, the name *Brasenia antiqua* was preoccupied at the time of its adoption by Dawson, a fact in regard to which he was apparently in ignorance (see *Brasenia antiqua* Newberry, desc. in Proc. U. S. Nat. Mus. 5: 514 (1882); undistributed plates, Cret. and Tert. Floras, pl. 68, fig. 7) and as Newberry's specimen, consisting of stems and fruit only, is from the eocene tertiary, there is little likelihood that the two are referable to the same species.

Under the circumstances I would propose that Dawson's plant be renamed, in accordance with recently adopted rules of nomenclature, as follows: *Nelumbo Dawsoni* = *Brasenia antiqua* Dawson (1885), not *Brasenia antiqua* Newberry (1882).

By this means Dawson's name may still be retained in connection with the plant which he unwittingly described under a name already preoccupied.

Finally, it may perhaps not be amiss to call attention to the geographical distribution of the living species. Only two are recognized, viz.: *N. nucifera* Gaertn., ranging from the Caspian Sea to Japan and thence southward to Australia, and *N. lutca* (Willd.) Pers., ranging from Kansas and Missouri to Lake Erie and thence southward to the West Indies. It is another example of the similarity between the floras of Eastern Asia and Eastern North America which has so often attracted the attention of those who

7. *N. nymphæoidea* Ettingsh. Sitzb. Wien Akad. 12: 182; Denkschr. Wien Akad. 8: 37, pl. 10, fig. 1; 11, fig. 2. = *N. nymphæoides* Ettingsh. (Schimp. Paléont. Veg. 3: 95).
8. *N. Casparianum* Heer, Fl. Tert. Helvet. 3: 299. = *N. Casparyanum* Heer (Schimp. Paléont. Veg. 3: 95).
9. *N. microcarpum* Ettingsh. and Gard. Proc. Roy. Soc. London, 29: 395.
10. *N. Ettingshausenii* Sieber, Sitzb. Wien Akad. 82, Abh. 1: 83, pl. 2, figs. 15, 16.
11. *N. provinciale* Sap. in Saporta and Marion's L'Évolution du Règne Végétale, Phanerogames, 2: 125, fig. 128; Mém. Soc. Géol. de France, 1, Fasc. 3: 2, 5, 7, pl. 1, fig. 1; 2, fig. 1; 3, figs. 1-6a. (*N. gallo-provinciale* Sap. in Zittel's Handbuch der Paläontologie, 509, is a mistake for *N. provinciale* Sap., made in describing the leaf of *N. provinciale* figured by Saporta as above, in connection with a valve of *Unio gallo-provinciale*.)
12. *N. proto-speciosum* Sap. Rev. Gen. de Bot. 2: 192; Mém. Soc. Géol. de France, 2, Fasc. 1: 5, 17, pl. 1, figs. 2, 3; 4, figs. 1, 2.

ASIATIC.

13. *Nelumbium* sp. Nath. Pal. Abhandl. 4: 27, pl. 7, fig. 20.

are interested in the problem of the distribution of plants. In this connection the fact that the genus was of almost universal distribution in the past, at least over the whole Northern hemisphere, until comparatively recent geologic times, is of the greatest interest and significance, not only in regard to its present distribution, but also in regard to the evolution of the living species. We are no longer under the necessity of accepting the almost impossible theory that the plants have migrated in modern times from one continent to another, but are irresistibly led to the rational conclusion that, inasmuch as the genus existed on both continents until very recent geologic times, the presence of the living species in their now isolated and widely separated ranges is merely due to the extinction of plants from former intermediate localities, probably due to the vast climatic changes wrought by the advent of the Ice Age. We should also be within the bounds of reason if we supposed that the two living species may have been merged in one common ancestor at no very remote date, and that the specific differences which we now note as existing between them have resulted from differences in environment since their isolation from each other.

We may also note, as of interest, that the leaves have constantly increased in size up to the present time. The American cretaceous species, if we except *N. arctica* Heer, from Greenland, began with leaves little more than an inch in diameter. In tertiary times they had developed to a diameter of four or five inches, while at the present day they reach a size of two feet or more.

Varieties of *Solidago* and *Aster*.

SOLIDAGO CANADENSIS GLABRATA n. var.

Stems low, 2–3 ft. high, puberulent above; leaves numerous, linear-lanceolate, upper ones entire, lower ones with a few sharp serratures, smooth above, somewhat pubescent on the midrib and veins beneath; panicles small, with slender branches; heads small; bracts of the involucre acute or acutish; rays short and few.

Mt. Desert Island, Me., *Rand* and *Redfield*. At several points along the Susquehanna river, Pa. In some states it approaches *S. rupestris* Raf.